Unit of inquiry planner

(Primary years)

OVERVIEW

Grade/Year level:	**K**	Collaborative teaching team:	**Gaby E, Silvia N, Laurie C, Mr. Murphy, Coach K**
Date:	**2022- 2023**	Timeline: (continued investigation, revisiting once, or numerous times, discrete beginning and ending, investigating in parallel with others)	

Transdisciplinary theme

(Type Transdisciplinary theme here.)

- An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and the environment.

Central idea

The world is made up of cycles and changes

Lines of inquiry

The different types of landforms.
How landforms are formed and how they are worn away.
Different types of landforms natural and man made

Key concepts

- -Function
- -Causation
- -Change

Related concepts

- Natural Resources
- -Environment
- -Change

Learner profile attributes

- Thinker
- -Reflective

Approaches to learning

- -Integrity
- -Respect
- -Curiosity

Action

Understand the importance of water conservation at home, school,city and NM state
Reflection in erosion, lack of rain in New Mexico
Cierra la llave y no desperdicies el agua.
Cuida el parque de recreo de la escuela

Prompts: Overview

Transdisciplinary theme

Which parts of the transdisciplinary theme will the unit of inquiry focus on?

Central idea

Does the central idea invite inquiry and support students' conceptual understandings of the transdisciplinary theme?

Lines of inquiry

What teacher questions and provocations will inform the lines of inquiry?

Do the lines of inquiry:

- clarify and develop understanding of the central idea?
- define the scope of the inquiry and help to focus learning and teaching?

Key concepts

Do the key concepts focus the direction of the inquiry and provide opportunities to make connections across, between and beyond subjects?

Related concepts

Do the related concepts provide a lens for conceptual understandings within a specific subject?

Learner profile attributes

What opportunities will there be to develop, demonstrate and reinforce the learner profile?

Approaches to learning

What authentic opportunities are there for students to develop and demonstrate approaches to learning?

Action

What opportunities are there for building on prior learning to support potential student-initiated action?

REFLECTING AND PLANNING

Initial reflections

Prior learning

- Organization
- Time management
- Classroom rules
- Materials usage
- Observations
-
- Questions during circle time.
- Globe presentation inquiry questions process, touch landform globe.
- Student’s knowledge in nomenclature and picture cards Land and water forms
- Puzzle maps
- World map labels during circle time

Connections: Transdisciplinary and past

Introduction to landforms
World and landform globe
Continent globe

Learning goals and success criteria

Student will be able to find where north, south, east and west is located

- Students will create a classroom map
- Students will have landforms made with clay
- Students will make a booklet with landforms
- Students will use the material in the center and will be capable to identify the different landforms in the world map
- Land air and water

Teacher questions

- What are landforms ?
  - How landforms change?
  - How landforms influence humans?
  - What is a river?
  - Is a volcano a landform? Active volcanos in the world
  -

Student questions

Pangea? What is it ?
Plate tectonics where are they?
What is inside the earth?
How are Mountains formed?
Where does water come from?
Why do volcanoes explode?

Prompts: Reflecting and planning

Initial reflections

How can our initial reflections inform all learning and teaching in this unit of inquiry?

Prior learning

How are we assessing students' prior knowledge, conceptual understandings and skills?

How are we using data and evidence of prior learning to inform planning?

How does our planning embrace student language profiles?

Connections: Transdisciplinary and past

Connections to past and future learning, inside and outside the programme of inquiry

What connections are there to learning within and outside the unit of inquiry?

What opportunities are there for students to develop conceptual understandings to support the transfer of learning across, between and beyond subjects?

How can we ensure that learning is purposeful and connects to local and global challenges and opportunities?

Learning goals and success criteria

What is it we want students to know, understand and be able to do? How are learning goals and success criteria co-constructed between teachers and students?

Teacher questions

What teacher questions and provocations will inform the lines of inquiry?

Student questions

What student questions, prior knowledge, existing theories, experiences and interests will inform the lines of inquiry?

DESIGNING AND IMPLEMENTING

Unit of inquiry and/or subject specific inquiry (inside/outside programme of inquiry)

Transdisciplinary theme/Central idea:	**The world is made up of cycles and changes**		
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Designing engaging learning experiences

Land and Water Work
___Land, Air, and Water (general)
___Land, Air, and Water Animals
Land, Air, and Water Transportation
Introduction to the Globes
___1st Globe—Sandpaper
___2nd Globe—Land/Water Forms
___3rd Globe—Continents/Oceans
___4th Globe—Traditional World Globe
Puzzle Maps
___Continent Map
___Child's Own Continent
___Child's Own Country
___Africa
___Asia
___Australia
___Europe
___North America
___South America
The Geography Cabinet
Continent Map
___Continents of the World
___Oceans of the World
___Location of the Equator
Land & Water Forms/Cards
___lake/island
___bay/cape
___peninsula/gulf
___isthmus/strait
___archipelago/system of lakes
Land & Water Forms—Clay Trays
___lake/island
___bay/cape
___peninsula/gulf

___isthmus/strait
___archipelago/system of lakes
Classified Nomenclature
___Parts of a Volcano
___Parts of a River
___Parts of a Mountain
Geography Impressionistic Charts
The Universe, Solar System, and Earth

Supporting student agency

Classroom materials
Land air and water nomenclature cards
Sand and continent globes
Plate tectonic maps
What is inside the earth material
Nomenclature parts of the river, parts of the mountain, and parts of volcanoes.
Google earth

Teacher and student questions

Pangea? What is it ?
Plate tectonics where are they?
What is inside the earth?
How are Mountains formed?
Where does water come from?
Why do volcanoes explode?

Ongoing assessment

- Thinking Skills – Acquisition of knowledge, Comprehension, Application, Analysis
  - Students will be able to know about water, and water cycle
  - Research Skills – Formulating questions, Observing, Collecting data to create the weather journal,
  - Learn the name of planets and continents
  - Organizing data – Students use be able to recognize weather and use of the thermometer and record in journal.
  - Self Management –Students will know the appropriate behavior for working with the materials in centers.

Making flexible use of resources

Map cabinet
Landforms water and land
Sand table
World puzzles
Land air and water material and nomenclature
Water cycle

Student self-assessment and peer feedback

Ongoing reflections for all teachers

Additional subject specific reflections

Target language Spanish . students relate letter sound and nomenclature (continents, oceans, landforms)

Prompts: Designing and implementing

Designing engaging learning experiences

What experiences will facilitate learning?

For all learning this means:

- developing questions, provocations and experiences that support knowledge and conceptual understandings
- creating authentic opportunities for students to develop and demonstrate approaches to learning and attributes of the learner profile
- building in flexibility to respond to students' interests, inquiries, evolving theories and actions
- integrating languages to support multilingualism
- identifying opportunities for independent and collaborative learning, guided and scaffolded learning, and learning extension.

Supporting student agency

How do we recognize and support student agency in learning and teaching?

For all learning this means:

- involving students as active participants in, and as co-constructors of, their learning
- developing students' capacity to plan, reflect and assess, in order to self-regulate and self-adjust learning
- supporting student-initiated inquiry and action.

Questions

Teacher questions

What additional teacher questions and provocations are emerging from students' evolving theories?

Student questions

What student questions are emerging from students' evolving theories?

Ongoing assessment

What evidence will we gather about students' emerging knowledge, conceptual understandings and skills?

How are we monitoring and documenting learning against learning goals and success criteria?

How are we using ongoing assessment to inform planning, and the grouping and regrouping of students?

Making flexible use of resources

How will resources add value and purpose to learning?

For all learning this means:

- the thoughtful use of resources, both in and beyond the learning community to enhance and extend learning. This might include time, people, places, technologies, learning spaces and physical materials.

Student self-assessment and peer feedback

What opportunities are there for students to receive teacher and peer feedback?

How do students engage with this feedback to self-assess and self-adjust their learning?

Ongoing reflections

For all teachers

- How are we responding to students' emerging questions, theories, inquiries and interests throughout the inquiry?
- How are we supporting opportunities for student-initiated action throughout the inquiry?
- How can we ensure that learning is purposeful and authentic and/or connects to real-life challenges and opportunities?
- How are we nurturing positive relationships between home, family and school as a basis for learning, health and well-being?

Additional subject-specific reflections

Inside or outside the programme of inquiry

- What opportunities are there for students to make connections to the central idea and lines of inquiry or the programme of inquiry?
- What opportunities are there for students to develop knowledge, conceptual understandings and skills to support the transfer of learning across, between and beyond subjects?

REFLECTING

Transdisciplinary theme/Central idea:	**The world is made up of cycles and changes**		
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Teacher reflections

IB learner profile: Thinker, reflective and principal

Key concepts: Function, Causation, Changing.

To what extent did we achieve our purpose?

Making PYP Happen Guidance

- **Thinking Skills – Acquisition of knowledge, Comprehension, Application, and Analysis – Students will be able to know about water, name of clouds Landforms, continents names, and name of oceans**
- **Research Skills – Formulating questions, Observing, Collecting data to create the weather journal, learn the name of landforms.**
- **Organizing data – Students use be able to understand weather and use of the thermometer and record in journal.**
- **Self Management –Students will know the appropriate behavior for working with the materials in centers.**
- **Principled: Students are acting with a strong sense of integrity as they use the new materials and learn to share and learn to work in groups.**

Making PYP Happen Guidance

This reflection not only gives the teachers the opportunity to improve the assessments, but also to modify and strengthen the central idea.

How could you improve on the assessment tasks) so that you would have a more accurate picture of each student's understanding of the central idea?

Assessment: teacher observation, to include anecdotal records; children's work samples (similar to products in a portfolio); journals

Evidence:

- **Mapping hand**
- **Mapping classroom**
- **Land air and water cards and nomenclature**
- **Landforms booklet**
- **Students level the different water and landforms**
- **Clay and plastic landforms work (mountains, volcanoes, rivers etc..)**

· **Mountain, Volcano and river booklet.**

· **Create a Volcano**

Making PYP Happen Guidance

Teachers should include clear and detailed examples of classroom discussions, comments or student work that demonstrate connections made between the central idea and the transdisciplinary theme.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

- **Teacher leads discussion on what is land, water and air using nomenclature cards and a KWL chart.**

Circle time (students comment as we inquire)

- **Teacher displays a picture of the earth (Google earth) land and continents globes**
- **Teacher sets up activity centers with art materials of landforms, map cabinet**
- **Students make a booklet of landforms and work on clay and sand to make landforms**

Making PYP Happen Guidance

Learning experiences that were particularly engaging, relevant, challenging and significant should be noted.

It is recognized that this planning tool cannot record all of the learning that takes place in a PYP classroom. Teachers should use their anecdotal records in order to more fully record the development of the attributes listed in the learner profile. This development is complemented and supported by the development of the PYP attitudes and teachers may also discuss them here.

What were the learning experiences that enabled students to:

Develop an understanding of the concepts identified in "What do we want to learn?"

Selected concepts: Reflection and Connection.

Demonstrate the learning and application of particular transdisciplinary skills?

- **Social skills-accepting responsibility and respecting others. Cooperating and learning about our role as part of the family and part of the class.**
- **Thinking skills- acquisition of knowledge, comprehension application, and analysis – students compare maps, and landforms.**
- **Research skills- observing, planning, and formulating questions, organization of data.**
- **Self-management skills- grace and courtesy in the classroom, golden rule fine and gross motor skills.**
- **Communication- listening skills, rising hand before speaking. Verbal and non-verbal.**

Students appreciate usage of maps and landform materials and are eager to learn from their peers and others. Balanced

Selected transdisciplinary skills:

- **Thinking skills. Anecdotal records, prior knowledge and pictures of students as we looked at pictures or videos and inquiry.**
- **Self-management. Students were able to properly use the materials in the different centers to develop and create different landforms.**
- **Research skills students were able to develop and create their land and water forms.**
- **Students were able to comment and have small discussions of the earthquakes, and the change the land suffered because of the earthquake and a tsunami. Active volcanoes**
- **Listening: While we are in circle time they respond to questions and respected while others made questions**
- **Curiosity: New materials are displayed to allow curiosity to build before lessons.**
- **Enthusiasm: Teacher models excitement about learning new concepts**

Develop particular attributes of the learner profile and/or attitudes?

Selected learner profile items: Inquirers, Thinkers, Risk-takers (Courageous)

Selected attitudes: Cooperation, Curiosity, Independence

What student-initiated inquiries arose from the learning?

Importance of water in the world Rio grande river

Making PYP Happen Guidance

A range of student questions and wonderings should be recorded as evidence of the range of conceptual understanding in the group.

Some student-initiated inquiries will be particularly influential in determining the nature of the inquiry and should be highlighted. These highlighted examples may influence and inform planning when the inquiry is next visited.

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

Curiosity: While the prepared environment is ready for a new lesson students start to formulate questions to start our inquiry time.

Enthusiasm: Students show enthusiasm to learn new concepts and materials they will be able to use after the lesson is presented.

Confidence: Students will be risk takers to use new materials and complete their work with confidence as they master the lesson.

Independence: Students will work independently as they use the materials.

At this point teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.

Teacher Questions:

- **What are landforms?**
- **How do landforms change?**
- **How landforms influence humans?**

Making PYP Happen Guidance

As the action component may develop spontaneously during the course of the inquiry, or even after the inquiry has been completed, this section may be revisited both during and after the inquiry.

Not every inquiry will necessarily have a student-initiated action component.

What student-initiated actions arose from the learning? Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

When we discussed the earthquakes and the tsunamis, the students were able to understand land and water forms and the constant changes of the earth features. Students' reflection was the world is constantly changing.

Maestra Silvia brought some volcanic rock from her hometown and shared with the kids. We again showed the volcanic rocks with students, even that Maestra Silvia is not here with us in the classroom

Students were able to reproduce some landforms while we worked with play dough during work day.

Student reflections

Discovering the importance of Land air and water
Changes in Land and Continents
Have knowledge of the Land (continents) and Oceans target language


How do numbers work ? Decimal system .

Assessment reflections

Circle time reflection and inquiry
Changes in the land inquiry and reflection
Water cycle
Summative Assessment landforms
Reflection how landforms change and affect our lives

Students will increase their understanding of their world, focusing on geography, and their environment.
They will appreciate the reasons why people belong to different countries.
They will recognize connections within and between systems by which people organize themselves (water cycle , landforms)
They will broaden their sense of place and the reasons why particular places are important to people.
Students will start to develop an understanding of their relationship with the environment.
They will gain a greater sense of time, recognizing important events in their own lives, and how time and change affect people.

STRAND : Geography Content Standard II:
Students understand how physical, natural, and cultural processes influence where people live, the ways in which people live, and how societies interact with one another and their environments. **K-4 Benchmark II-A**: Understand the concept of location by using and constructing maps, globes, and other geographic tools to identify and derive information about people, places, and environments.
Grade Performance Standards K 1. Define relative location of items in the physical environment in terms of over, under, near, far, up, and down.
2. Define personal direction of front, back, left, and right. 1 1. Understand maps and globes as representations of places and phenomena. 2. Identify and use the four cardinal directions to locate places in community, state, and tribal districts.
3. Create, use, and describe simple maps to identify locations within familiar places (e.g., classroom, school, community, state). 2 1. Use a variety of maps to locate specific places and regions. 2. Identify major landforms, bodies of water, and other places of significance in selected countries, continents, and oceans. 3 1. Identify and use the mapping tools of scale, compass rose, grid, symbols and mental mapping to locate and draw places on maps and globes;

K-4 Benchmark II-B: Distinguish between natural and human characteristics of places and use this knowledge to define regions, their relationships with other regions, and patterns of change. Grade Performance Standards K 1. Identify natural characteristics of places (e.g., climate, topography). Water and landforms (Island, lake, Peninsula, golf
etc..)

K-4 Benchmark II-C: Be familiar with aspects of human behavior and man-made and natural environments in order to recognize their impact on the past and present. Grade Performance Standards K 1. Identify family customs and traditions and explain their importance. June 2009 3 2. Describe the natural characteristics of places (e.g., landforms, bodies of water, natural resources, and weather)

K-4 Benchmark II-D: Understand how physical processes shape the Earth's surface patterns and biosystems. Grade Performance Standards K 1. Describe the Earth's physical characteristics

K-4 Benchmark II-F: Describe how natural and man-made changes affect the meaning, use, distribution, and value of resources. Grade Performance Standards K 1. Identify natural resources. 1 1. Describe the role of resources in daily life.

Domain 5 } Scientific Conceptual Understanding

The child acquires scientific knowledge related to earth science.
16.1 Investigates, compares, and contrasts seasonal and weather changes in the immediate environment.


Layers of the Earth
MANTLE
2,900 km thick
Temperature: 1,000°C
Consistency: Plastic
Contains: Oxygen, Silicon, Magnesium, Aluminum, Silicates
CRUST
3 to 30 km thick
INNER CORE
2,340 km diameter
Temperature: 4,300°C
Consistency: Solid
Contains: Iron, Nickel
MOHOROVICIC DISCONTINUITY (MOHO)
SUPERPLUME
D-LAYER
CORE
2,200 km thick
Temperature: 3,700°C
Consistency: Liquid
Contains: Iron, Sulfur, Oxygen


Corrales
International
School
Nombre
Placas tectonicas
Nucleo
exterior
Nucleo

Prompts: Reflecting

Teacher reflections

How did the strategies we used throughout the unit help to develop and evidence students' understanding of the central idea?

What learning experiences best supported students' development and demonstration of the attributes of the learner profile and approaches to learning?

What evidence do we have that students are developing knowledge, conceptual understandings and skills to support the transfer of learning across, between and beyond subjects?

To what extent have we strengthened transdisciplinary connections through collaboration among members of the teaching team?

What did we discover about the process of learning that will inform future learning and teaching?

Student reflections

What student-initiated inquiries arose and how did they inform the process of inquiry? What adjustments were made, and how did this enrich learning?

How are students supported in having voice, choice and ownership in the unit of inquiry? (For example, through: co-constructing learning goals and success criteria, being engaged in student-initiated inquiries and action, being involved in self-assessing and self-regulating, co-designing learning spaces and so on).

How have these experiences impacted on how students feel about their learning? (For example, through: developing and demonstrating attributes of learner profile and approaches to learning, developing understanding of the central idea, achieving learning goals, taking action and so on).

Assessment reflections

How effective was our monitoring, documenting and measuring of learning informing our understanding of student learning?

What evidence did we gather about students' knowledge, conceptual understandings and skills?

How will we share this learning with the learning community?

Notes


Australia
Oceano
Indico
Africa
Oceano
Atlantico


Océano Ártico
Océano Atlántico
Océano Pacífico
Océano Índico
Océano Antártico
Polo Norte
Polo Sur
Océano Ártico
Océano Atlántico
Océano Pacífico
Océano Antártico
Polo Sur